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## NOTICE OF ALLOWANCE AND FEE(S) DUE

36088 7590 09/14/2009

KANG LIM  
3494 CAMINO TASSAJARA ROAD #436  
DANVILLE, CA 94506

EXAMINER

COLBERT, ELLA

ART UNIT

PAPER NUMBER

3696

DATE MAILED: 09/14/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/741,957

12/20/2000

Phil Delurgio

DT-0004

7258

TITLE OF INVENTION: FINANCIAL MODEL ENGINE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	12/14/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

36088 7590 09/14/2009

**KANG LIM**  
3494 CAMINO TASSAJARA ROAD #436  
DANVILLE, CA 94506

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/741,957 12/20/2000 Phil Delurgio DT-0004 7258

TITLE OF INVENTION: FINANCIAL MODEL ENGINE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$0 \$0 \$1510 12/14/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
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COLBERT, ELLA 3696 705-035000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,957	12/20/2000	Phil Delurgio	DT-0004	7258
36088	7590	09/14/2009	EXAMINER	
KANG LIM			COLBERT, ELLA	
3494 CAMINO TASSAJARA ROAD #436			ART UNIT	PAPER NUMBER
DANVILLE, CA 94506			3696	
DATE MAILED: 09/14/2009				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 780 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 780 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/741,957	DELURGIO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ella Colbert	3696	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11 May 2009.
2. ☒ The allowed claim(s) is/are 3,4,6,11,12 and 14-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|--|---|

### **DETAILED ACTION**

1. Claims 3, 4, 6, 11, 12, and 14-23 are pending in this communication filed 05/26/09 entered as Appeal Brief under 37 C.F.R. 41.37.

In view of the Appeals Conference Request filed on 05/26/09 and the Appeals Panel Decision on 07/23/09 to allow the application, PROSECUTION IS HEREBY REOPENED as set forth here below.

2. The 35 USC 112, First Paragraph Rejections are hereby withdrawn in view of Applicants' arguments and amendments to the claims.

3. The 35 USC 112, Second Paragraph Rejections are hereby withdrawn in view of

4. Applicants' arguments and amendments to the claims.

The Final Rejection is hereby withdrawn and any outstanding After Final amendments will be entered.

### ***EXAMINER'S AMENDMENT***

An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicants', an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in Interviews on 03 August 2009 and 19 August 2009 in a telephone call on 19 August 2009 to Attorney Kang Lim.

Claim 3 (Currently Amended). An apparatus for modeling costs, [useful] in association with an optimization engine and at least one merchandise store coupled to

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the apparatus via a network, wherein the at least one merchandise store includes at least one of a brick-and-mortar store, an online store, and a catalog store, and wherein the optimization engine is configured to receive input from the apparatus, and wherein the optimization engine is further configured to generate a preferred set of prices, the apparatus comprising:

an econometric engine implemented by a computer for receiving sales data from at least one merchandise store via the network, cleansing the sales data and generating imputed variables by imputing at least one missing data point; and  
a financial engine implemented by the computer for receiving imputed variables from the econometric engine, receiving cost data from at least one merchandise store via the network, generating a cost model for at least one product, and outputting the cost model to the optimization engine, wherein the cost model models costs of the at least one product given the merchandise store, a demand group and a selected time period, and wherein the demand group is a group of highly substitutable products.

**ABSTRACT**

The present invention relates to a system and method for modeling costs, useful in association with an optimization engine. Generally, an econometric engine receives sales data, cleanses the data and generates imputed variables. A financial engine couples to the econometric engine. The financial engine receives imputed variables from the econometric engine, and receives cost data. The financial engine also generates a cost model, and outputs the cost model to the optimization engine.

### ***Reasons for Allowance***

Claims 3, 4, 6, 11, 12, and 14-23 are allowed.

The following is an Examiner's statement of reasons: The best prior art of record, Dulaney et al. discloses only costs that are associated with stocking, holding and lost sales that are considered for the generation of an inventory shelf space management plan. Dulaney et al. does not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point. Montgomery and Rossi discloses how price elasticity estimates can be improved in demand systems that involve multiple bands and stores by treating the demand models in a hierarchical Bayesian framework. Montgomery and Rossi do not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point. Maeda et al. discloses predicting the sales of an item where the price of the item is set to a value. Maeda et al. does not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point. Klots et al. discloses inventory that moves through a distribution center and optimal load balancing to meet the different customers different needs and preferences.



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Klots et al. does not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point. Sheldon et al. discloses and inventory management system and generating order data in response to reference data. Sheldon et al. does not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point. Ettl et al. discloses providing inventory optimization for levels of products in a complex supply chain network and calculates a total inventory cost for all products in the network then optimizes the fill rates based on the estimated gradient information of the total inventory costs. Ettl et al. does not disclose cost modeling being generated as including all levels of an organization hierarchy, and the cost model being used to generate optimal pricing for a given product of a demand group and an econometric engine for generating imputed variables by imputing at least one missing data point.

An extensive search of the applicable prior art was done but showed no better references.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Other Prior Art***

The other prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hammer, Peter J., "Antitrust beyond competition: Market failures, total welfare, and the challenge of intra market second-best tradeoffs".

Tanguay, Georges A.; Vallee, Luc; and Lanoie, Paul, "Shopping hours and price levels in the retailing industry; a theoretical and empirical analysis".

**LexisNexis Articles (2, 3, 5, and 7):**

Focus-2-Lexis Nexis Document: Business Wire, "FSbuy.com Partners With Vitria to Dramatically Enhance Its E-business Solution for the Foodservice Industry".

FOCUS-3-Lexis Nexis Document: Ellram, Lisa, "Total cost of ownership: elements and implementation".

FOCUS-4-Lexis Nexis Document: Farris, M. Theodore II, "Utilizing inventory flow models with suppliers".

FOCUS-7-Lexis Nexis Document: "Inventory Reduction Report", May 1996.

**Inquiries**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 571-272-6741. The examiner can normally be reached on Monday, Tuesday, and Thursday, 5:30AM-3:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dixon Thomas can be reached on 571-272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ella Colbert/  
Primary Examiner, Art Unit 3696

August 24, 2009